

REMARKS

Claims 1-3, 7, 10, 13, 16 and 17 are rejected under 35 USC §102(e), as allegedly being anticipated by Lin et al. (US 6,743,669, hereinafter "Lin").

Claims 1-3, 8, 11-13, 17, 18, 20 and 21 are rejected under 35 USC §102(b), as allegedly being anticipated by Shin et al. (US 20020037611, hereinafter "Shin").

Claims 1-3, 6, 9, 13, 14, 17 and 19 are rejected under 35 USC §102(e), as allegedly being anticipated by Sugiyama et al. (US 6,800,909, hereinafter "Sugiyama").

Claims 1-5, 10, 13 and 15-17 are rejected under 35 USC §103(a), as allegedly being unpatentable over Krivokapic et al. (US 6,512,273, hereinafter "Krivokapic") in view of Lin.

Applicants respectfully traverse the §102 and §103 rejections with the following arguments.

35 U.S.C. § 102Lin

Applicants respectfully contend that Lin does not anticipate independent claims 1 and 13 because Lin does not teach each and every feature of these claims.

For example, Lin does not teach removing the liner from regions of the substrate and gate stack not covered by the spacer, and leaving the liner in regions of the substrate and gate stack covered by the spacer; and performing a preclean process to etch surfaces of the substrate not covered by the liner, wherein the liner is not removed during the preclean process, as recited in claims 1 and 13 of the present application.

The Examiner claims that Lin discloses forming an etch resistant liner (207) over the gate stack and forming a spacer (205) over the liner. Applicants assert that while portions of the oxide 207 not covered by the spacer 205 are removed during a preclean process, (col. 6, lns. 56-60; Fig. 2C), there is no subsequent preclean process to etch surfaces of the substrate not covered by the liner, wherein the liner is not removed, as required by the present invention.

Therefore, Applicants respectfully maintain that Lin does not anticipate independent claims 1 and 13, and that claims 1 and 13 are in condition for allowance. Furthermore, since claims 2-12 depend from claim 1 and claims 14-21 depend from claim 13, Applicants contend that claims 2-12 and 14-21 are likewise in condition for allowance.

Shin

Applicants respectfully contend that Shin does not anticipate independent claims 1 and 13 because Shin does not teach each and every feature of these claims.

For example, Shin does not teach forming an etch resistant liner over a gate stack, forming a spacer over the liner along sidewalls of the gate stack, after forming the liner, forming a conductive material in the regions of the substrate and gate stack not covered by the liner, as recited in claims 1 and 13 of the present application.

The Examiner claims that Shin discloses forming an etch resistant liner (20) over the gate stack, forming a spacer (24) over the liner and forming conductive material (18/22). As stated in paragraphs [0018] and [0019] of Shin, the spacer 20 is formed along the sidewalls of polysilicon layer 16, followed by the formation of refractory metal silicide 18 and 22. After the formation of the conductive material 18/22, the liner 24 is deposited over the entire surface of the structure. Unlike the present invention, wherein the formation of the liner precedes the formation of the conductive material 18/22, Shin teaches forming the conductive material after the spacer 20 and before the liner 24.

Therefore, Applicants respectfully maintain that Shin does not anticipate independent claims 1 and 13, and that claims 1 and 13 are in condition for allowance. Furthermore, since claims 2-12 depend from claim 1 and claims 14-21 depend from claim 13, Applicants contend that claims 2-12 and 14-21 are likewise in condition for allowance.

Sugiyama

Applicants respectfully contend that Sugiyama does not anticipate independent claims 1 and 13 because Sugiyama does not teach each and every feature of these claims.

For example, Sugiyama does not teach removing the liner from regions of the substrate and gate stack not covered by the spacer, and leaving the liner in regions of the substrate and gate

stack covered by the spacer; performing a preclean process, wherein the liner is not removed during the preclean process; and forming a conductive material, as recited in claims 1 and 13 of the present application.

The Examiner claims that Sugiyama discloses forming an etch resistant liner (7) over the gate stack and forming a spacer (11) over the liner. Applicants assert that once the spacer 11 is formed (Fig. 8J), no portion of the liner 7 is removed, as required by the present invention. In fact, there are no portions of the liner not covered by the spacer that could be removed. Furthermore, there is no preclean process performed prior to forming the conductive material, rather, Sugiyama teaches ion implantation immediately followed by metal formation, (col. 12, lns. 23-51).

Therefore, Applicants respectfully maintain that Sugiyama does not anticipate independent claims 1 and 13, and that claims 1 and 13 are in condition for allowance. Furthermore, since claims 2-12 depend from claim 1 and claims 14-21 depend from claim 13, Applicants contend that claims 2-12 and 14-21 are likewise in condition for allowance.

35 U.S.C. § 103

Applicants respectfully contend that claims 1 and 13 are not unpatentable over Krivokapic in view of Lin, because Krivokapic and Lin do not teach or suggest each and every feature of independent claims 1 and 13.

For example, Krivokapic and Lin do not teach or suggest performing a preclean process, wherein the liner is not removed during the preclean process, prior to forming a conductive material in the regions not covered by the liner, as required in claims 1 and 13.

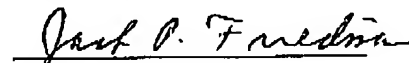
The Examiner states that Krivokapic teaches each claimed feature of the present invention with the exception of the formation of the conductive material, which the Examiner alleges Lin provides. Applicants assert that at no time does Krivokapic teach a preclean process, as required by the present invention. As shown *supra*, Lin also fails to teach the preclean process, wherein the liner is not removed, prior to the formation of a conductive material. Applicants, therefore, contend that the combination of Krivokapic and Lin fail to teach all aspects of the present invention.

Based on the preceding arguments, Applicants respectfully maintain that claims 1 and 13 are not unpatentable over Krivokapic and Lin, and that claims 1 and 13 are in condition for allowance. Since claims 2-12 depend from claim 1 and claims 14-21 depend from claim 13, Applicants contend that claims 2-12 and 14-21 are likewise in condition for allowance.

Conclusion

Based on the preceding arguments, Applicants respectfully believe that claims 1-21 and 32, as well as the entire application, meet the acceptance criteria for allowance and therefore request favorable action. However, should the Examiner believe anything further is necessary in order to place the application in better condition for allowance, or if the Examiner believes that a telephone interview would be advantageous to resolve the issues presented, the Examiner is invited to contact the Applicants' undersigned representative at the telephone number listed below. The Director has hereby authorized to charge and/or credit Deposit Account No. 09-0457.

Respectfully submitted,



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